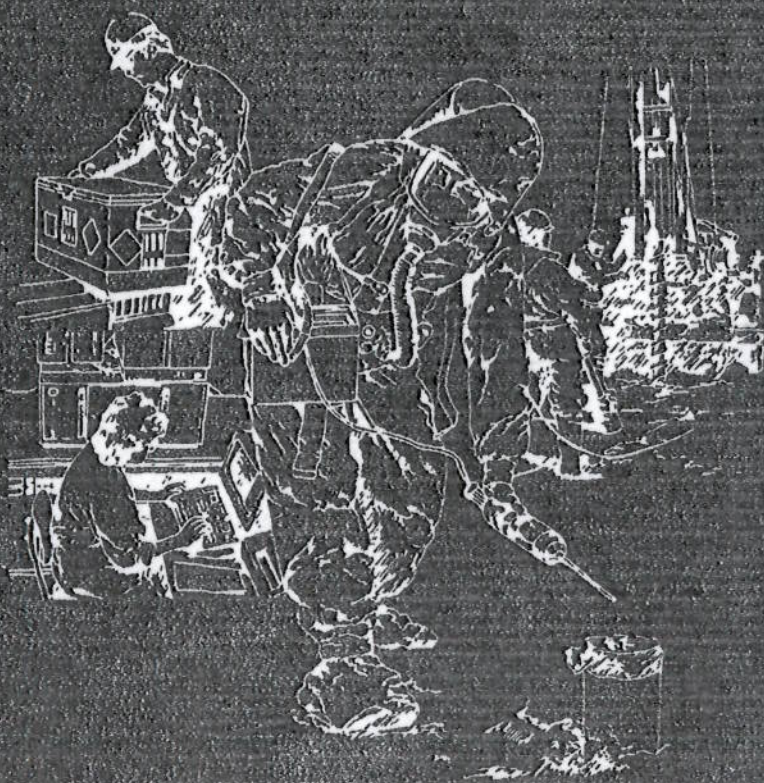


Purpose: CERCLA Screening Site Inspection

Site: Kaiser Cement Corporation  
24001 Stevens Creek Blvd.  
Permanent, California 95014  
Santa Clara County

EPA  
HAZARDOUS  
SITE  
EVALUATION  
DIVISION

Field Investigation Team Zone II



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Purpose: CERCLA Screening Site Inspection

Site: Kaiser Cement Corporation  
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Santa Clara County

Site EPA ID Number: CAD009109539  
TDD Number: F9-9007-006  
Program Account Number: FCA0715SBA  
FIT Investigators: Peter Towle  
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Date of Inspection: August 27, 1990  
Report Prepared By: Peter Towle  
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Report Date: February 2, 1991  
FIT Review/Concurrence: Karen Jadd 2/6/91  
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EPA Region IX  
Site Assessment Manager



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## 1. INTRODUCTION

Under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA) the U.S. Environmental Protection Agency (EPA) has tasked Ecology and Environment, Inc.'s Field Investigation Team (FIT) to conduct a Screening Site Inspection of the Kaiser Cement Corporation site in Permanente, California. This report summarizes FIT's investigative efforts.

## 2. SITE DESCRIPTION

### 2.1 SITE LOCATION AND OWNER/OPERATOR HISTORY

The Kaiser Cement Corporation (Kaiser) site is located at the western terminus of Stevens Creek Boulevard in Permanente, Santa Clara County, California (Township 7 South, Range 22 West, Section 16, Mount Diablo Base Line and Meridian; Latitude: 37° 19' 19", Longitude: 122° 05' 00") (1). The Kaiser site covers approximately 3500 acres in the foothills of the Santa Cruz Mountains and consists of open land, a quarry, and the cement plant production facility (see Figure 2-1, Site Location Map). Adjacent to the Kaiser site is the, now closed, Kaiser Aluminum and Chemical plant (Kaiser Aluminum) which covers approximately 150 acres (2). ~~Kaiser Aluminum is evaluated as a separate site by EPA~~ *Kaiser Aluminum* (EPA ID# CAD982358087).

A residential neighborhood of the City of Cupertino is located approximately 0.5 miles east of Kaiser. Approximately 1 mile north of Kaiser is Rancho San Antonio Park, a 165-acre county-run recreational area. Land immediately surrounding Kaiser is predominantly open area owned by either Kaiser, Kaiser Aluminum, or the Midpeninsula Regional Open Space District, which buys land and sets it aside as a preserve (3). Permanente Creek flows adjacent to Kaiser on its southern and eastern boundaries. Approximately 8 miles downstream from Kaiser plant, Permanente Creek flows into the southern part of San Francisco Bay (1).

The Kaiser facility was first constructed in 1939. Since the time of construction, the plant has undergone periodic expansions and process changes, the most recent change taking place in 1981. Kaiser Cement is a publicly held corporation (4).



Source: U.S.G.S. 7.5' Mendocino Hill and Cupertino Quadrangle



Figure 2-1 SITE LOCATION MAP  
KAISER CEMENT CORPORATION  
24001 STEVENS CREEK BLVD.  
PERMANENTE, CALIFORNIA

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## 2.2 FACILITY PROCESSES

The Kaiser facility was constructed at its present location in 1939. The facility was originally constructed to help provide Portland cement for the building of Hoover Dam. The present location was chosen because of its proximity to a large limestone deposit; limestone is the main ingredient in the Portland cement produced by Kaiser (4,5). Figure 2-2 is a Facility Map.

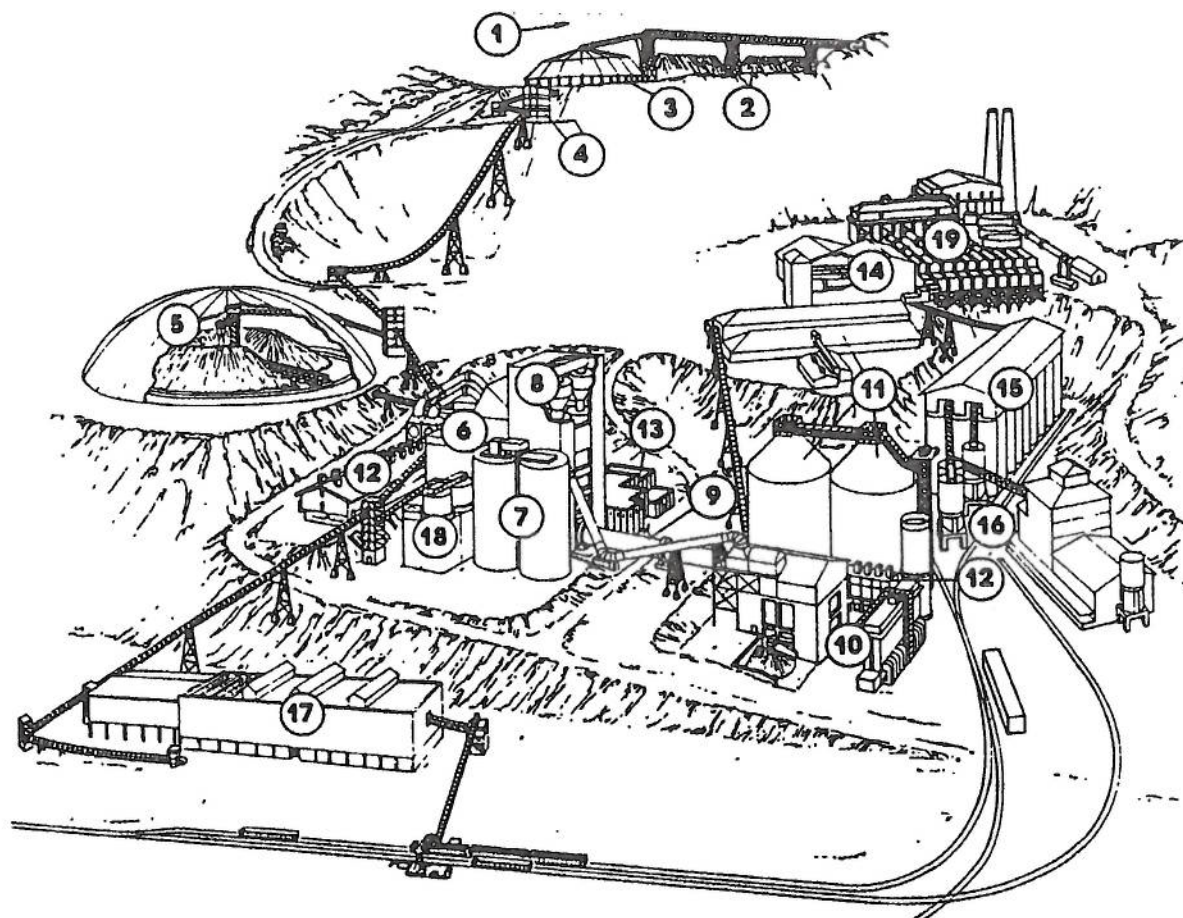
### 2.2.1 Historical

Initially, the Kaiser facility produced cement using a wet kiln process. The wet kiln process, which requires large quantities of water and fuel is briefly described here. The raw ingredients of cement, including 95 percent limestone and 5 percent clay silica, alumina, and iron, are finely crushed in large rotating crushers. The limestone powder is sluiced in water to further homogenize the raw materials and to ease transport. The wet feed material is then fed into large tube-shaped rotating kilns where temperatures up to 2,800°F evaporate the water and fuse the raw materials together forming marble like pellets called clinker (4,5,6).

The clinker is crushed using ball mills, large rotating containers partially filled with iron balls, where the rotating motion causes the iron balls to crush the clinker into a fine powder. The final product, Portland cement, is obtained by adding 4 percent gypsum to the fine powder (4,6).

By the late 1970s, Kaiser operated six wet kilns and produced approximately 1.5 million tons of cement per year. By the early 1980s, however, the increasing costs of water and fuel prompted Kaiser to change from a wet kiln process over to a dry kiln process (6).





- 1 - QUARRY & PRIMARY & SECONDARY CRUSHERS
- 2 - LIMESTONE STORAGE
- 3 - CLAY STORAGE DOME
- 4 - TERTIARY CRUSHER
- 5 - PREBLEND DOME
- 6 - RAW MATERIALS MILLING
- 7 - HOMOGENIZING SILOS
- 8 - PREHEATER / PRECALCINER TOWER
- 9 - ROTARY KILN
- 10 - CLINKER COOLERS

- 11 - CLINKER STORAGE
- 12 - BAGHOUSE DUST COLLECTORS
- 13 - OFFICE & COMPUTER CENTER
- 14 - FINISH CEMENT MILLING
- 15 - CEMENT STORAGE
- 16 - SHIPPING
- 17 - COAL & ADDITIVE STORAGE
- 18 - COAL PROCESSING
- 19 - ORIGINAL PLANT

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Figure 2-2 FACILITY MAP  
KAISER CEMENT CORPORATION  
24001 STEVENS CREEK BLVD.  
PERMANENTE, CALIFORNIA

### 2.2.2 Current

In 1981, Kaiser completed construction of a new dry kiln facility and began producing cement using the dry kiln process. Kaiser replaced the six wet kilns with one large dry kiln of equal capacity. The dry kiln process, which requires substantially less water and fuel than the wet kiln process, is described in the following paragraph (4,6).

The same raw materials that were used in the wet kiln process: limestone, clay silica, alumina, and iron, are used in the dry kiln process. These materials are finely crushed and homogenized in large rotating crushers. The resulting limestone powder is then sifted through a preheater tower where the powder is slightly heated and further homogenized. The bottom of the preheater tower feeds directly into the rotating kiln. The dry kiln is 16 feet in diameter and approximately 250 feet long. Limestone powder is fed through the dry kiln where temperatures up to 2,800°F fuse the materials together to form clinker. The clinker is "quench-cooled" with a quick dose of water to keep materials in the pellet form. The clinker is then crushed in ball mills where 4 percent gypsum is added and the resulting Portland cement is produced (4,6).

## 2.3 WASTE MANAGEMENT

There are three types of wastes associated with processes at the Kaiser facility: cement kiln bricks, cement kiln dust, and solvents and waste oils. The sources and management practices of each of these wastes are described below.

### 2.3.1 Cement Kiln Bricks

A portion of the interior of both wet and dry kilns are lined with cement kiln bricks. The bricks help buffer the kiln from the extreme temperatures reached inside. ~~Starting in approximately 1950, an unknown portion of the wet kilns used at Kaiser were lined with kiln bricks that were made with 20 percent chromic oxide.~~ Approximately every 9 to 12



months these bricks would wear out and would then be replaced with new bricks. From 1950, when Kaiser first started using bricks which contained chromium, to 1981, Kaiser disposed of some of these bricks, possibly including the ones that contained chromium, to a dump located on Kaiser Aluminum property. Since 1981, when the dry kiln process was started, all cement kiln bricks have been recycled in with the raw ingredients used to make cement (5).

### 2.3.2 Cement Kiln Dust

When the finely crushed raw materials are fed through the kiln, the extreme heat reached inside volatilizes heavy metals from the limestone and other raw materials. The heavy metals volatilized from the raw materials subsequently become entrained in dust that is vented from the kiln and preheater tower. This dust, which contains low levels of various heavy metals is referred to as cement kiln dust (7).

Over the history of operations at the Kaiser facility it has always been normal procedure to vent cement kiln dust from the kilns back into the cement production cycle with the raw materials. On occasions however, the venting system fails and cement kiln dust either spills on the ground or accumulates in storage areas without making it back to the raw feed. In these circumstances, Kaiser collects the dust and disposes of it to a dumping area up near the quarry. This dumping area is used to dispose of overburden material accumulated during blasting in the quarry. The cement kiln dust is disposed of randomly with the overburden in this dumping area (5,7).

### 2.3.3 Solvents and Waste Oil

Solvents and various oils are used to maintain the many machines and vehicles employed at the Kaiser facility. Until 1985 all waste oils and solvents produced at the facility were stored in two underground storage tanks. In 1985 consultants for Kaiser removed a 2,000-gallon waste oil tank and closed a 1,000-gallon solvent tank in place (2,8). Since 1985 all waste oil and solvents have been stored in two separate aboveground

tanks located in the garage area. The tanks are located within secondary containment. The waste oil is picked up and tested for purity at Kaiser by Alviso Oil Co. every few months. Kaiser produces approximately 6,000 gallons of waste oil per year. Solvents are manifested off site by Environmental Service Group. Approximately 500 gallons of solvents per year are used at Kaiser (2).

Presently, solvents and oils to be used at Kaiser are stored in three locations. Listed below are the quantities of solvents and oils stored at these locations (9).

- o The Maintenance Yard: Approximately 9,000 gallons of oil in aboveground tanks and 110 gallons of solvents in drums are stored in the maintenance yard area.
- o Rotary Kiln: Located near the rotary kiln is a shed which houses 2,800 gallons of oil in drums and approximately 1,000 gallons of solvents in an aboveground tank.
- o Finish Mill: Located outside the finish mill is a shed which houses 500 gallons of oil in an aboveground tank and 2,000 gallons of oil in drums.

Additionally, hydraulic oil, antifreeze, and batteries used by Kaiser are stored in a shed in the maintenance yard (9).



### 3. APPARENT PROBLEM

Apparent problems that exist at the Kaiser site stem from past management practices of spent cement kiln bricks, cement kiln dust, and petroleum products used at the site. Each of these three waste sources are addressed separately below.

#### 3.1 CEMENT KILN BRICKS

Between 1950 and 1981, Kaiser disposed of cement kiln bricks, which contained 20 percent chromic oxide, to a dump located on the adjacent Kaiser Aluminum property (the dump was used by both Kaiser and Kaiser Aluminum) (5). In addition to cement kiln bricks, Kaiser used the dump to dispose of precalcinated (i.e., prior to the kiln) material that spilled from the cement production process (5,10).

A potential exists for chromium, contained in the cement kiln bricks, to leach out of the dump and into groundwater. The kiln bricks are buried in the dump. The dump does not have an engineered liner or cover (2). Currently, consultants for Kaiser Aluminum are collecting samples from the dump area as part of the closing process of the facility (2). Soil samples collected from the dump area have shown elevated levels of heavy metals, including chromium (11).

Currently, Kaiser recycles all cement kiln bricks used at the site by mixing them in with the other raw materials used to make cement (5).

#### 3.2 CEMENT KILN DUST

Cement kiln dust, created during the heating process in the kiln, is vented back into the cement production process with the other raw materials. On occasion, the venting system fails and the cement kiln dust spills on the ground or accumulates in storage areas without making its way back into the production cycle. This excess kiln dust is disposed of to the overburden area located by the quarry (5,7).

A potential exists for cement kiln dust, disposed of in the dumping area, to migrate to air and surface water.

### 3.3 SOLVENTS AND OILS

In 1985, consultants for Kaiser implemented a closure and/or monitoring plan for a total of 20 underground tanks at the Kaiser facility. The 20 tanks constituted all underground storage tanks used at the Kaiser facility. These tanks held product oil, waste oil, solvents, gasoline, and diesel (2,8).

Two of the 20 underground tanks at Kaiser held waste oils and solvents. The waste oil tank was removed and the underlying soils were analyzed for total petroleum hydrocarbons (TPH), polychlorinated biphenols (PCBs), and volatile chlorinated organics. All soil samples contained nondetectable levels of all constituents. The underground solvents tank was closed in place by filling with cement grout. Two soil samples were collected beneath the tank and analyzed for volatile chlorinated organics and TPH. No constituents were detected in either sample (8).

The remaining 18 of 20 underground tanks at Kaiser held product oil, gasoline, and diesel. Three of these tanks are still in operation at the plant gas station. Monitoring wells have been installed around these tanks to detect any leaks that may occur. The remainder of the tanks were removed in 1985. It was discovered that at least four of the tanks removed had leaked product oil or gasoline and diesel to underlying soils (8). Currently, the Santa Clara Valley Water District is giving oversight to Kaiser for the cleanup of these fuel leaks (12). The fuel leaks will not be addressed further since the CERCLA definition of a "hazardous substance" [Section 101 (14)] and a "pollution or contaminant" [Section 101 (33)] excludes "petroleum, crude oil, or any fraction thereof" from CERCLA unless specifically listed under those sections.



#### 4. REGULATORY INVOLVEMENT

Historically, California Regional Water Quality Control Board (RWQCB) has been concerned with the accidental discharge of stormwater runoff into Permanente Creek. During periods of heavy rain, the runoff holding pond and sump at the facility periodically overflowed and discharged unacceptable levels of silt and deleterious material into Permanente Creek. These events led RWQCB to issue Waste Discharge Order 74-65 in 1974 requiring Kaiser to remediate this problem (13). RWQCB issued a second order, Cleanup and Abatement Order No. 79-002, to Kaiser after investigating an oil spill into Permanente Creek in 1979. Once again RWQCB cited unacceptable levels of silt and deleterious material flowing into Permanente Creek from runoff at Kaiser (14).

Currently, RWQCB is not investigating operations at Kaiser. Under cooperative agreement with RWQCB, however, the Santa Clara Valley Water District is giving oversight to Kaiser for cleanup of the fuel leaks discovered when underground storage tanks were removed at the site (12).

The Santa Clara County Health Department (SCCH) currently regulates all hazardous materials storage and disposal at the Kaiser facility. SCCH officials inspect Kaiser approximately once every one to two years. No major violations have been issued against Kaiser. According to SCCH, Kaiser officials are helpful and up-front when dealing with the county (15).

The Bay Area Air Quality Management District (BAAQMD) regulates both combustion emissions from the cement kiln and dust emissions from various machinery. Kaiser monitors nitrous oxide and sulfur oxide emissions from the cement kiln. These monitoring results are sent to BAAQMD on a monthly basis. BAAQMD has issued approximately 100 to 120 permits for machinery used at Kaiser. These permits apply to machinery that is regulated for dust emissions; e.g., raw mills, finishing mills, etc. BAAQMD inspects Kaiser approximately every four to eight weeks. Kaiser has been cited three times in the last eight months for visible emissions violations (1,16).

Kaiser is listed as a small quantity generator in the May 9, 1990 Resource Conservation and Recovery Act database. Kaiser is not listed on the January 1990 update of the California Expenditure Plan for the Hazardous Substances Cleanup Bond Act of 1984 (17).



## 5. rHRS FACTORS

The revised Hazard Ranking System (rHRS) is a scoring system used to assess the relative threat associated with actual or potential releases of hazardous substances from sites. It is the principal mechanism EPA uses to place sites on the National Priorities List (NPL). FIT has evaluated the following rHRS factors relative to this site.

### 5.1 WASTE TYPE AND QUANTITY

FIT identified two sources of potentially uncontained hazardous substances at the Kaiser site: kiln bricks and cement kiln dust. Waste oil and solvents will not be evaluated here because storage of these hazardous substances appears adequate to prevent migration to the environment (2).

A portion of the cement kiln bricks used at Kaiser consisted of 20 percent chromic oxide. Based on the chemical makeup of chromic oxide (68.43 percent chromium) the cement kiln bricks contained approximately 13.7 percent pure trivalent chromium (18). Between 1950 and 1981, Kaiser removed between 1,000 and 2,500 tons of cement kiln bricks from kilns used on site. According to Kaiser personnel, only a small portion of the bricks were disposed of to the dump located on Kaiser Aluminum property. The remaining portion of the kiln bricks were recycled into the cement production process (5,19).

Kaiser personnel estimate that on the average 360 to 600 tons of cement kiln dust per year gets deposited to the overburden pile. Kaiser qualified this figure by saying that Kaiser does not dispose of kiln dust to the overburden pile with any frequency. According to Kaiser personnel, they will often go a year without needing to dump excess kiln dust to the pile and on other occasions, due to equipment failure, they may need to dispose of kiln dust to the overburden pile three to four times in one week (7).

Cement kiln dust produced at Kaiser contains elevated levels of some heavy metals. The source of these heavy metals is from the raw materials used in the cement process and from the coal used to fire the kiln. According to Kaiser, the level of heavy metals in the kiln dust used in making cement naturally varies depending upon levels contained in the raw materials. Table 5-1 lists selected heavy metal concentrations in a cement kiln dust sample collected at Kaiser. The levels shown in Table 5-1 however may be different from cement kiln dust produced at a different time due to the natural variation of heavy metals used in the raw materials. Table 5-1 also includes, for the purpose of comparison, the concentrations of heavy metals in Portland Cement produced at Kaiser (7,20).

Table 5-1

SELECTED HEAVY METALS IN CEMENT KILN DUST

Heavy Metal	Cement Kiln Dust (mg/kg)	Cement (mg/kg)	TTL* (mg/kg)
Mercury	25	<2.0	20
Arsenic	9.93	21.3	500
Beryllium	6.12	0.635	75
Cadmium	21.3	7.02	100
Chromium	35.9	67.1	2,500
Lead	61.5	54.7	1,000

\* California Department of Health Services Total Threshold Limit Concentration.

## 5.2 GROUNDWATER

A majority of the Kaiser facility, including the Kaiser Aluminum dump, is located in the Santa Cruz Highland area of the South Bay Groundwater Basin. The Santa Cruz Highland area is characterized by the exposure of non-water-bearing rock types. These rock types include marine sandstone, shale, and chert with some conglomerate and limestone lentils. Nearly all of the rock types comprising the non-water-bearing formations are consolidated and of low permeability; they do not have primary openings large enough to allow movement of groundwater. Groundwater does exist in



these formations however in secondary openings formed by fractures, joints, shear zones, and faults. The secondary openings provide minimal storage space and avenues for movement of groundwater, which explains the ability of these rocks to yield small quantities of groundwater (21).

Located within 0.25 miles of the Kaiser Aluminum dump is an area of the South Bay Groundwater Basin characterized by exposures of permeable beds in the Santa Clara Formation. These exposures, although unimportant to the production of groundwater, do provide recharge into deeper aquifers in the groundwater basin. Recharge occurs both by infiltration of rainfall and infiltration of water flowing in several streams in the area. Permanente Creek, which runs along the eastern border of Kaiser, appears to be one such stream (21).

A soil boring drilled into the Kaiser Aluminum dump encountered groundwater at 81 feet below ground surface (bgs). According to the driller's log it appears that fill material extends to a depth of 65 feet bgs (22). Groundwater encountered in the dump area, although not directly infiltrating into the aquifers, may migrate to the nearby groundwater recharge zone via fractures, joints, and sheer zones. Once groundwater migrates from the dump area to the area of recharge, it potentially could migrate to the aquifers of the South Bay Groundwater Basin.

Consultants for Kaiser Aluminum have recently collected soil samples from the dump area. Analyses of soil samples collected from a single boring drilled in the portion of the dump reportedly used by Kaiser were available for review for this report. Analytical data of soil samples representing background/reference conditions were also available for review. Soil samples from the Kaiser Aluminum portion of the dump were not available for review. The report evaluating the entire dump area had not been completed at the time of this report. Soil samples were analyzed for heavy metals, priority pollutant volatiles, and total extractable hydrocarbons. Elevated levels of three heavy metals and TPH were detected in samples. No volatiles were detected. Table 5-2 lists the highest levels of heavy metals and TPH detected in the one soil boring analyzed from the dump (11,23).

Table 5-2

SELECTED HEAVY METALS AND TPH LEVELS DETECTED  
IN THE KAISER ALUMINUM DUMP

Contaminant	Highest Level Detected (mg/kg)	Background Level (mg/kg)
Barium	1,060	195
Chromium	152	28.4
Mercury	12.6	1.06
TPH	1,200	ND

ND - Not detected in samples.

It should be noted that these levels of contaminants represent samples collected from only one soil boring in the Kaiser Aluminum dump area.

Consultants for Kaiser Aluminum collected groundwater samples from the boring drilled in the Kaiser Aluminum dump. Samples were analyzed for heavy metals, priority pollutant volatiles, and TPH. All samples showed non-detect or levels less than three times detection limits for all heavy metals and priority pollutant volatiles. One groundwater sample showed 3.6 milligrams per liter (mg/L) of TPH in groundwater (24).

The cities of Sunnyvale and Cupertino have groundwater wells within 4 miles of the Kaiser facility. Sunnyvale has two wells within 3 miles and an additional three wells within 4 miles of Kaiser. Water from these five wells is blended with water from six other wells to serve approximately 218,000 persons (25).

The city of Cupertino currently uses only one well within 4 miles of Kaiser to obtain drinking water. This well serves approximately 2 to 3 percent of the total water connections in Cupertino. Currently there are 4,200 water connections with approximately 13,860 persons using this water for drinking (26).



### 5.3 SURFACE WATER

Permanente Creek, a spring fed surface water body, runs along the southern and eastern borders of the Kaiser property. The creek originates upstream from Kaiser and flows approximately 8 miles downstream from Kaiser into the southern portion of San Francisco Bay. Permanente Creek runs in a natural riparian corridor upstream and immediately downstream of Kaiser; however, on Kaiser property the creek is concrete-lined. Portions of Permanente Creek further downstream of Kaiser are both earthen and concrete-lined. Permanente Creek runs intermittently throughout the year (1,2,27).

All surface water runoff from the developed portion of the Kaiser plant is collected in a sump. Water collected from runoff is reused in processes at the plant (5). Surface water runoff from the quarry area drains mostly into the quarry itself; yet, some runoff flows into Permanente Creek. A potential exists for kiln dust deposited in the overburden pile, located in the quarry area, to migrate to Permanente Creek. Permanente Creek is located within 500 feet of the overburden pile. According to Kaiser personnel, the kiln dust deposited in the overburden pile is usually covered up with overburden within a day or two. If kiln dust is exposed during a period of rain, however, the kiln dust may migrate to Permanente Creek (1,2,7).

Permanente Creek flows through a sediment pond, constructed by Kaiser, prior to flowing off Kaiser property. The sediment pond, in theory, is supposed to collect excess sediment originating from Kaiser which is caught in the creek. The sediment pond is dredged approximately once a year (2). It is unknown where the dredged material is deposited. Historically, the adequacy of the sediment pond in preventing excess sediment from flowing past Kaiser has been questioned by RWQCB. Past incidents of excess sediment and deleterious material flowing past the facility has resulted in two RWQCB orders issued to Kaiser (see Section 4) (13,14). Taking these incidents into account, a potential exists for kiln dust to migrate off Kaiser property via Permanente Creek.

Permanente Creek is not used as a drinking water source (27). Beneficial uses of Permanente Creek include aesthetic and rare and endangered species habitat. The California tiger salamander (Ambystoma tigrinum californiense), a candidate species for Federal listing, may use Permanente Creek immediately downstream of Kaiser for a breeding habitat (3). Within 7 miles of where Permanente Creek flows into San Francisco Bay the following Federal or State listed endangered species may exist (3,28):

Table 5-3

**ENDANGERED SPECIES IN SOUTH SAN FRANCISCO BAY**

<u>Species</u>	<u>Latin Name</u>	<u>Endangered Status</u>
California brown pelican	<u>Pelecanus occidentalis californicus</u>	Federal, State
Salt marsh harvest mouse	<u>Reithrodontomys raviventris</u>	Federal, State
California clapper rail	<u>Rallus longirostris obsoletus</u>	Federal, State
California least tern	<u>Sterna antillarum browni</u>	Federal, State

In addition to these Federal and State endangered species, the San Francisco Bay National Wildlife Refuge and approximately 20 miles of wetlands exist within 7 miles of where Permanente Creek flows into San Francisco Bay (29,30).

The 2-year, 24-hour rainfall in the area of Kaiser is 4.5 inches (31). Kaiser is located in an Area D Flood Zone, an area of minimal flooding (32).



#### 5.4 AIR

The quarry/overburden area appears to be the only location at the Kaiser facility that may potentially release contaminants to air. Cement kiln dust containing elevated levels of some heavy metals (see Table 5.1) is periodically disposed of to this area.

A surface soil sample collected from the Kaiser Aluminum dump does not show contaminants significantly above background (33). However, it should be noted that only one sample from the dump was analyzed. The Kaiser facility is strictly regulated by BAAQMD for combustion and dust emissions (16).

Approximately 360 to 600 tons of cement kiln dust is dumped into the overburden pile each year. According to Kaiser personnel, the frequency of kiln dust being dumped into the pile is sporadic; dumping varies from maybe three to four times per week to once a year. Kaiser personnel further state that kiln dust deposited in the overburden pile is usually covered up within a day or two by overburden from the quarry (7). The overburden pile, located adjacent to the quarry, does not have an engineered cover preventing dust from migrating to air. Besides receiving kiln dust (a comparatively small quantity of material), the overburden pile receives unusable rock from the quarry (2).

Land surrounding Kaiser and the quarry/overburden area primarily is open land owned by either Kaiser, Kaiser Aluminum, or the Midpeninsula Regional Open Space District. Land owned by Midpeninsula Regional Open Space District is open for public use and portions of it appear to be within 0.5 miles of the quarry/overburden area. Located approximately 1 to 2 miles from the quarry/overburden area is habitat used by the California tiger salamander (Ambystoma tigrinum californiense), a candidate species for Federal endangered species listing (3).

The approximate number of persons living within 4 miles of the quarry/overburden pile is 50,578 (34). Currently, 300 persons are employed at the Kaiser facility (2).

## 5.5 SOIL EXPOSURE

A potential exists for surface soils in the overburden/quarry area to be contaminated with cement kiln dust. Cement kiln dust, containing elevated levels of some heavy metals (see Table 5-1) is periodically disposed of to this area. According to Kaiser, kiln dust disposed of to this area is usually covered up with overburden from the quarry within 1 to 2 days. This area has not been sampled to determine if contaminants associated with kiln dust exists in surface soils (2,7).

The Kaiser Aluminum dump does not appear to contain contamination surface soils. A surface soil sample collected from the dump area did not show any contaminants at levels exceeding three times background (33). It should be noted, however, that data from only one sample from the dump was available for this report. There has been no known off-site sampling for contaminants associated with the Kaiser facility.

The Kaiser facility is operated 24 hours a day, 7 days per week. Kaiser is completely fenced and a security guard maintains the front gate (2). Kaiser Aluminum has recently closed down. The Kaiser Aluminum facility, which is adjacent to Kaiser, is completely fenced (2). The population within 1 mile of Kaiser is approximately 3,066 (34).



## 6. SUMMARY OF FIT INVESTIGATIVE ACTIVITIES

The following agencies were contacted during the investigation of the Kaiser site to obtain historical information, permitting violations and other general information on the Kaiser facility.

- o Bay Area Air Quality Management District,
- o California Regional Water Quality Control Board,
- o Santa Clara County Health Department, and
- o Santa Clara County Water District.

Ecology and Environment, Inc.'s Field Investigation Team (E & E FIT), with EPA concurrence, determined that sampling at the Kaiser site is not necessary at this time. Consultants for Kaiser Aluminum are currently investigating the dump located on Kaiser Aluminum property (35).

On August 27, 1990, Peter Towle, Lester Aaron, and Bradford Webb (E & E FIT) conducted a site reconnaissance visit at the Kaiser facility. FIT interviewed Jeff Weist and M.V. Bishop of Kaiser Cement Corporation. During the interview and tour of the facility, the following information about Kaiser was collected (2):

- o The Kaiser facility, which encompasses approximately 3,500 acres is completely fenced. A security guard is stationed at the front entrance 24 hours a day.
- o Kaiser Aluminum, located next door, comprises approximately 150 acres and is completely fenced.
- o Currently all waste oil and solvents are stored in two separate aboveground tanks located near the garage area. They appeared in good condition.
- o The overburden pile is located next to the quarry. It is not covered. Permanente Creek is approximately 500 feet down a steep embankment from the overburden area.
- o Permanente Creek is cement-lined on Kaiser property.

- o There is a sediment pond located on Permanente Creek just prior to where the creek flows off of Kaiser property. The pond is used to trap excess sediment. It is dredged approximately once a year. It was being dredged when FIT was on site.
- o Kaiser Aluminum dump is located just beyond the property line from the old kiln area of Kaiser. It is not covered. It is approximately 0.25 miles from Permanente Creek.



## 7. EMERGENCY RESPONSE CONSIDERATIONS

The National Contingency Plan [40 CFR 300.415 (b)(2)] authorizes the EPA to consider emergency response actions at those sites which pose a potential to release contaminants to the environment. There does not appear to be a need for emergency response at the Kaiser site at this time. The Kaiser facility is adequately secured to prevent public access. Additionally, there is a sufficient amount of open space buffering nearby residents from areas of possible contamination.

## 8. SUMMARY OF rHRS CONSIDERATIONS

The Kaiser Cement Corporation (Kaiser) site is located at the western terminus of Stevens Creek Boulevard in Permanente, California. The site, consisting of a cement production facility and a quarry, is situated on 3,500 acres of land in the Santa Cruz Mountains. Adjacent to the site is the now-closed Kaiser Aluminum and Chemical plant (Kaiser Aluminum). Permanente Creek runs along the southern and eastern borders of the site. A residential neighborhood of the city of Cupertino is located approximately 0.5 miles east of Kaiser.

Between 1950 and 1981 Kaiser disposed of an unknown amount of cement kiln bricks, containing approximately 13 percent chromium, to a dump located on Kaiser Aluminum property. Both Kaiser and Kaiser Aluminum utilized portions of the dump. Kaiser officials maintain that the portions of the dump used by Kaiser and Kaiser Aluminum are separated by a rock ridge which geographically divides the dump into two portions. Samples collected from a soil boring drilled in the Kaiser portion of the site showed slightly elevated levels of heavy metals including chromium. Samples from the Kaiser Aluminum portion of the dump were not available for review at the time of this report. A potential exists for contaminants located in the dump to migrate to groundwater.

Currently, Kaiser periodically disposes cement kiln dust, which contains slightly elevated levels of heavy metals, to an overburden pile located adjacent to the quarry. The kiln dust is eventually covered by quarry overburden; however, during periods of exposure, cement kiln dust may potentially migrate to air and surface water.

A summary of significant rHRS factors associated with the Kaiser Cement site is listed below:

- o Although groundwater serves a moderately large population, the nearest drinking water wells to the Kaiser facility are approximately 2 to 3 miles away;



- o Nearby surface water is not used for drinking; and
- o Both Kaiser and Kaiser Aluminum property are adequately fenced to prevent public access to the facilities.

## 9. EPA RECOMMENDATION

	<u>Initial</u>	<u>Date</u>
No Further Remedial Action Planned under CERCLA	<u>JW</u>	<u>2-19-91</u>
Higher-Priority LSI under CERCLA	<u>      </u>	<u>      </u>
Lower-Priority LSI under CERCLA	<u>      </u>	<u>      </u>
Defer to Other Authority (e.g., RCRA, TSCA, NRC)	<u>      </u>	<u>      </u>

### Notes:

Although there is some potential for groundwater contamination, it does not appear that this site would score high enough for NPC fishing due to the distance of the wells from the site.

Surface water pathway would score minimal due to lack of actual contamination.

Soil pathway would score minimal due to the fact that the site is fenced & locked.

Although there is an observed release to air, the air pathway would score low due to lack of actual contamination of target areas.

*for the*

2-19-91

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34. U.S. Environmental Protection Agency (EPA), Office of Toxic Substances, Graphical Exposure Modeling System, March 1989.
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**APPENDIX A**  
**Contact Log and Reports**



CONTACT LOG

Facility Name: Kaiser Cement Corp.  
Facility ID: CAD009109539

Name	Affiliation	Phone #	Date	Information
Ed James	City of Sunnyvale	408-738-5606	7/23/90	See Contact Report.
James Davis	City of Cupertino	408-252-4505	7/30/90	See Contact Report.
Jeff Weist	Kaiser Cement	415-256-3029	8/6/90	See Contact Report.
Doug Crumney	Santa Clara County Water District	408-265-2600	8/6/90	See Contact Report.
Zack Carter	Santa Clara County	408-299-2171	8/6/90	The Kaiser Cement property is located in a Flood Zone D, an area of minimal flooding.
Jeff Weist M.V. Bishop	Kaiser Cement	---	8/27/90	Site Reconnaissance.
Lisa Nelson	EPA, Region IX	415-744-2347	9/25/90	See Contact Report.
Jim Blamey	Santa Clara County Health Dept.	408-299-6930	9/27/90	See Contact Report.
M.V. Bishop	Kaiser Cement	415-256-3029	12/7/90	See Contact Report.
Jeff Weist	Kaiser Cement	415-256-3029	12/12/90	See Contact Report.
Penny Silzer	RWQCB	415-464-1255	12/12/90	See Contact Report.
John Marvin	BAAQMD	415-771-6000	12/12/90	See Contact Report.

# CONTACT REPORT

<b>AGENCY/AFFILIATION:</b> City of Sunnyvale		
<b>DEPARTMENT:</b> Public Works		
<b>ADDRESS/CITY:</b> Sunnyvale		
<b>COUNTY/STATE/ZIP:</b> California		
<b>CONTACT(S)</b>	<b>TITLE</b>	<b>PHONE</b>
1. Ed James, John Linda		408-738-5606
2. Bill Weisend		
<b>E &amp; E PERSON MAKING CONTACT:</b> Chris Nelson		<b>DATE:</b> 7/23/90
<b>SUBJECT:</b> Water supply, City of Sunnyvale		
<b>SITE NAME:</b> Micrel Wafer Fab Division/Kaiser		<b>EPA ID#:</b> CAD009109539

1. Water from Sunnyvale's 11 wells is blended together with surface water from Hetch Hetchy Reservoir and Santa Clara Valley Water District Well Water before serving. The entire service population of 118,000 would at some time be receiving some percentage of well water. A labor force of approximately 100,000 additional people enters the area during business hours, and consumes water from the city system.
2. The following wells are owned by the City of Sunnyvale and serve a base population of 118,000 plus a daily influx of 100,000 people.

WELL	LOCATION	DEPTH TO HIGHEST LEVEL OF PERFORATION
Schroeder	6S/2W25H01	401 ft.
Central	6S/2W36A01	208 ft.
Industrial	6S/1W31B03	321 ft.
Losse	6S/2W35M01	225 ft.
Serra	7S/2W11A01	318 ft.
Hamilton	7S/2W02E01	291 ft.
	7S/2W02E02	416 ft.
Westmore	7S/2W11G02	260 ft.

pt/kaiser/clcr

<u>WELL</u>	<u>LOCATION</u>	<u>DEPTH TO HIGHEST LEVEL OF PERFORATION</u>
Raynor	7S/1W06R02	328 ft.
Wolfe/Homestead	7S/1W07F01	354 ft.
Ortega Park	7S/1W07/01	250-300 ft.



# CONTACT REPORT

<b>AGENCY/AFFILIATION:</b> City of Cupertino		
<b>DEPARTMENT:</b> Public Works Department		
<b>ADDRESS/CITY:</b> Cupertino		
<b>COUNTY/STATE/ZIP:</b> Santa Clara, California		
<b>CONTACT(S)</b>	<b>TITLE</b>	<b>PHONE</b>
1. James Davis	Water Worker II	408-252-4505
2.		
<b>E &amp; E PERSON MAKING CONTACT:</b> Peter Towle		<b>DATE:</b> 7/30/90
<b>SUBJECT:</b> Groundwater wells		
<b>SITE NAME:</b> Kaiser Cement Corp.		<b>EPA ID#:</b> CAD009109539

- o The City of Cupertino has two groundwater wells: #2 and #3.
- o Only well #2 is currently in use.
- o Well #2 is used only once a week for about six to seven hours each week. The city runs the well in order to change the water in the pipes. The well is mostly just a back-up well.
- o Well #2 serves 2 to 3 percent of the total water used by the city of Cupertino. The other 97 to 98 percent comes from the Santa Clara Valley Water District (SCVWD).
- o Water from Well #2 is blended with water obtained from SCVWD.
- o The city serves approximately 4,200 connections. Mr. Davis believes that there are an average of 3.3 persons per household and that most of the 4,200 connections serve households.
- o The wells are located at DeAnza and Homestead streets, approximately 3.25 miles from Kaiser.

# CONTACT REPORT

AGENCY/AFFILIATION: Kaiser Cement Corp.		
DEPARTMENT:		
ADDRESS/CITY: P.O. Box 8019, Walnut Creek		
COUNTY/STATE/ZIP: California 94596		
CONTACT(S)	TITLE	PHONE
1. Jeff Weist	Environmental Engineer	415-256-3029
2.		
E & E PERSON MAKING CONTACT: Peter Towle		DATE: 8/6/90
SUBJECT: General information about Kaiser Cement Corp.		
SITE NAME: Kaiser Cement Corp.		EPA ID#: CAD009109539

- o The Kaiser Cement Corp. (Kaiser) Permanente plant produces Portland Cement.
- o The constituents of Portland cement include: limestone, clay-alumina, iron, clay, and bauxite. Limestone makes up 85 percent of the final product.
- o Raw material mined at the Kaiser property include limestone, clay-alumina, and iron. Clay and bauxite are bought by Kaiser for the process.
- o Excess kiln dust collected during the process is returned to the process as raw meal.
- o On occasion, dust is dumped in the overburden area by the quarry. Dust is only dumped when there has been a malfunction in the dust collecting system.
- o Kiln bricks used by Kaiser are referred to as mag/chrome bricks because the bricks are made up of approximately 80 percent magnacite and 20 percent chromium oxide.
- o The kiln bricks are replaced every 9 to 12 months.
- o It has been Kaiser's working procedure to recycle the kiln bricks into the raw feed. Kaiser is able to do this because the product produced by Kaiser is low in magnacite. Kaiser can therefore add kiln bricks, which contain magnacite, to the raw material and continue to produce a quality product.

pt/kaiser/clcr

- o Between 1950 and 1981 a portion of kiln bricks may have been disposed of to the Kaiser Aluminum dump. After 1981 all bricks have been recycled back into the cement production process.
- o Kaiser currently purchases kiln bricks from National Refractories in Moss Landing.
- o In the past, Kaiser purchased kiln bricks from Kaiser Refractories (currently National) and North American Refractories.
- o Located at the low end of the plant is a sump which collects surface water at the plant. Water collected in the sump is pumped up to a holding pond on site and reused in the cement production process.
- o Air monitoring of the combustion sources at the site is conducted. This includes monitoring for sulfuric and nitrogen oxides.
- o Air monitoring is conducted by Kaiser and sent to BAAQMD the Bay Area Air Quality Management District.



# CONTACT REPORT

<b>AGENCY/AFFILIATION:</b> Santa Clara County Water District		
<b>DEPARTMENT:</b>		
<b>ADDRESS/CITY:</b> 5750 Almaden Expressway, San Jose		
<b>COUNTY/STATE/ZIP:</b> Santa Clara, California		
<b>CONTACT(S)</b>	<b>TITLE</b>	<b>PHONE</b>
1. Doug Crummey		408-265-2600
2.		
<b>E &amp; E PERSON MAKING CONTACT:</b> Peter Towle		<b>DATE:</b> 8/6/90
<b>SUBJECT:</b> Permanente Creek		
<b>SITE NAME:</b> Kaiser Cement Corp.		<b>EPA ID#:</b> CAD009109539

- o Permanente Creek, a spring-fed creek, originates somewhere upstream of Kaiser Cement Corp.
- o Permanente Creek runs in a natural riparian corridor from above the Kaiser plant down to Stevens Creek Boulevard, but not on Kaiser property.
- o From Stevens Creek Boulevard to the bay, Permanente Creek flows in either an earthen corridor or a concrete or rip-rap lined channel.
- o Permanente Creek runs intermittently throughout the year.
- o Mr. Crummey does not believe the stream is used for fishing.
- o Permanente Creek is not used as drinking water source.

# CONTACT REPORT

AGENCY/AFFILIATION: EPA Region IX		
DEPARTMENT:		
ADDRESS/CITY: 75 Hawthorne Street		
COUNTY/STATE/ZIP: San Francisco, California		
CONTACT(S)	TITLE	PHONE
1. Lisa Nelson	Site Assessment Manager	415-744-2347
2.		
E & E PERSON MAKING CONTACT: Peter Towle		DATE: 9/25/90
SUBJECT: Sampling at Kaiser Cement		
SITE NAME: Kaiser Cement Corp.		EPA ID#: CAD009109539

- o I reviewed the Kaiser Cement site with Lisa Nelson.
- o She concurred that sampling at the site is not recommended at this time.

# CONTACT REPORT

AGENCY/AFFILIATION: Santa Clara County Health Department		
DEPARTMENT: Toxic Control Unit		
ADDRESS/CITY: 2220 Moorpark Avenue, San Jose		
COUNTY/STATE/ZIP: Santa Clara County, California 95128		
CONTACT(S)	TITLE	PHONE
1. Jim Blamey	Hazardous Materials Specialist	408-299-6930
2.		
E & E PERSON MAKING CONTACT: Peter Towle		DATE: 9/27/90
SUBJECT: Regulation information		
SITE NAME: Kaiser Cement Corp.		EPA ID#: CAD009109539

- o According to Mr. Blamey, Santa Clara County Health Department (SCCH) regulates hazardous materials storage and disposal at the Kaiser facility.
- o Mr. Blamey stated that Santa Clara County has not cited Kaiser for any major violations; however, minor violations have been noted during site inspections. These minor violations are usually corrected.
- o Kaiser Cement personnel have been up front and helpful with the Santa Clara County Health Department.
- o SCCH inspects the Kaiser plant about once every 1 to 2 years.



# CONTACT REPORT

AGENCY/AFFILIATION: Kaiser Cement Corp.		
DEPARTMENT:		
ADDRESS/CITY: P.O. Box 8019, Walnut Creek		
COUNTY/STATE/ZIP: California 94596		
CONTACT(S)	TITLE	PHONE
1. M.V. Bishop	V.P. Manufacturing Services	415-256-3079
2. Alan Lattaner	Consultant, Woodward Clyde	408-297-9585
E & E PERSON MAKING CONTACT: Peter R. Towle		DATE: 12/7/90
SUBJECT: General information regarding the dump		
SITE NAME: Kaiser Cement Corp.		EPA ID#: CAD009109539

- o Currently, Woodward Clyde Consultants is conducting an investigation on the dump located on Kaiser Aluminum property.
- o The dump was used by both Kaiser and Kaiser Aluminum. Kaiser used the dump to dispose of precalcinated material that spilled from the cement production process. In addition, some cement kiln bricks may have been disposed of to the dump.
- o The total size of the dump is approximately 3 to 5 acres.
- o The dump was used by both Kaiser Aluminum and Kaiser Cement. The dump itself, located in the hills behind Kaiser Aluminum, is geographically divided by a ridge outcropping from the hillside. One portion of the dump was used by Kaiser Aluminum while the other portion was used by Kaiser Cement.
- o In the portion of the dump used by Kaiser, Woodward Clyde has drilled two soil borings and one groundwater monitoring well. Data from samples collected from the soil borings will be sent to me early next week.
- o Groundwater samples have not been collected from the groundwater well. The well was completed within the last week. Woodward Clyde installed a suction cup lysimeter to collect water in the vadose zone of the groundwater well.
- o The vadose zone was encountered at 50 feet below ground surface in the groundwater well.

pt/kaiser/clcr

# CONTACT REPORT

AGENCY/AFFILIATION: Kaiser Cement Corp.		
DEPARTMENT:		
ADDRESS/CITY: P.O. Box 8019, Walnut Creek		
COUNTY/STATE/ZIP: California 94596		
CONTACT(S)	TITLE	PHONE
1. Jeff Weist	Environmental Engineer	415-256-3029
2.		
E & E PERSON MAKING CONTACT: Peter Towle		DATE: 12/12/90
SUBJECT: Background information		
SITE NAME: Kaiser Cement Corp.		EPA ID#: CAD009109539

- o Exhaust vented from the preheater tower goes directly to a baghouse. Particulates in this exhaust are scrubbed out of the exhaust in the baghouse. Material scrubbed out in the baghouse is the cement kiln dust.
- o All cement kiln dust gets put back into the cement production process. On occasion the system that returns the kiln dust to the cement production process fails. Until the system gets fixed and can continue returning the kiln dust to the process, kiln dust is disposed of to the overburden pile up at the quarry.
- o According to Mr. Weist, the amount of kiln dust returning to the process per hour is approximately 30 tons.
- o Mr. Weist further stated that if he had to estimate, the amount of kiln dust that gets disposed of to the overburden pile is anywhere from 360 to 600 tons per year. This figure is based on the system failing anywhere from 12 to 20 hours per year.
- o Mr. Weist qualified this figure by saying that the system has gone for a year without failing while on other occasions the system has broken down three to four times in a given week.
- o There is no set location in the overburden pile where the cement kiln dust is disposed. The kiln dust disposed of to the overburden pile generally gets covered up within a day or two.

- o Cement kiln dust frequently contains some slightly elevated levels of heavy metals. These metals are a result of the various raw materials and coal used in the process. Because the raw materials change, the levels of heavy metals change.
- o Rain runoff from the overburden pile primarily flows into the quarry. Some runoff however, flows into Permanente Creek. Runoff water collected in the quarry is used in processes at the plant. Runoff water is pumped from the quarry via pipes to the cement plant.
- o The Bay Area Air Quality Management District (BAAQMD) closely regulates activities at Kaiser.
- o Kaiser monitors nitrous oxides and sulfuric oxides generated from the kiln exhaust. Kaiser sends these results to BAAQMD every month.
- o The kiln emits 250,000 cubic feet per minute of exhaust.
- o BAAQMD inspects the Kaiser plant every four to six weeks.
- o There are approximately 100 to 120 permitted pieces of machinery at Kaiser. These permits apply to machinery that potentially give off particulate dust.
- o Kaiser is frequently inspected by the Mine Safety and Health Administration (MSHA). MSHA inspects the safety of working conditions at the site.



# CONTACT REPORT

AGENCY/AFFILIATION: California Regional Water Quality Control Board		
DEPARTMENT:		
ADDRESS/CITY: Oakland		
COUNTY/STATE/ZIP: Alameda County, California		
CONTACT(S)	TITLE	PHONE
1. Penny Silzer		415-464-1255
2.		
E & E PERSON MAKING CONTACT: Peter Towle		DATE: 12/12/90
SUBJECT: State involvement		
SITE NAME: Kaiser Cement Corp.		EPA ID#: CAD009109539

- o The regional board (RWQCB) has been involved with the Kaiser site in Permanente in the past.
- o Currently, in cooperation with RWQCB, the Santa Clara Valley Water District is giving oversight to Kaiser for cleanup of a fuel leak.
- o RWQCB is currently not investigating the Kaiser plant.

# CONTACT REPORT

AGENCY/AFFILIATION: Bay Area Air Quality Management District		
DEPARTMENT:		
ADDRESS/CITY: 939 Ellis Street, San Francisco		
COUNTY/STATE/ZIP: San Francisco County, California 94109		
CONTACT(S)	TITLE	PHONE
1. John Marvin		415-771-6000
2.		
E & E PERSON MAKING CONTACT: Peter Towle		DATE: 12/12/90
SUBJECT: General regulatory information		
SITE NAME: Kaiser Cement Corp.		EPA ID#: CAD009109539

- o Mr. Marvin confirmed the following information stated by Mr. Weist of Kaiser:
  - 1) BAAQMD monitors emissions from the cement kiln.
  - 2) They also have approximately 100 to 120 permits for machinery at Kaiser.
  - 3) BAAQMD inspects the site generally every four to six weeks.
- o Mr. Marvin stated that BAAQMD has cited Kaiser three times in the last six to eight months for visible emissions stemming from a 'secondary plume' formation.
- o BAAQMD has asked Kaiser to look into the "secondary plume" formation in more detail.
- o Mr. Marvin stated that Kaiser has been very good in the past in addressing problems cited by BAAQMD.

# **SITE RECONNAISSANCE INTERVIEW AND OBSERVATIONS REPORT**

Ecology and Environment, Inc.		
Field Investigation Team (FIT)		
160 Spear Street, Suite 1400		
San Francisco, California 94105		
(415) 777-2811		
<b>E &amp; E PERSON(S) CONDUCTING INTERVIEW AND MAKING OBSERVATIONS:</b>		
Peter Towle, Lester Aaron, and Bradford Webb		
<b>FACILITY REPRESENTATIVE(S):</b>	<b>TITLE:</b>	<b>PHONE:</b>
Jeff Weist	Environmental Engineer	
M.V. Bishop	V.P. Manufacturing Services	
<b>SITE NAME:</b> Kaiser Cement Corporation		<b>DATE:</b> 8/27/90
<b>CITY/STATE:</b> Permanente, California		<b>EPA ID#:</b> CAD009109539

The following information was obtained during the interview:

- o The Kaiser Cement Corp. facility at Permanente is approximately 3,500 acres. The facility is completely fenced and the front entrance is maintained by a security guard on a 24-hour a day basis.
- o The facility operates 24 hours a day, 7 days a week. The current work force at Kaiser is approximately 300 employees.
- o Kaiser Aluminum Chemical plant is located adjacent to Kaiser. The Kaiser Aluminum facility is approximately 150 acres. Kaiser Aluminum has recently shut down.
- o All waste oil and solvents were stored in underground tanks until 1985. Currently they are stored in above ground tanks near the garage area.
- o Waste oil is picked up by Alviso Oil Co. every few months. Kaiser produces approximately 6,000 gallons of waste oil per year.
- o Solvents are manifested off site by Environmental Service Group. Kaiser uses approximately 500 gallons per year.
- o The overburden pile has not been sampled.



- o Kaiser Aluminum is currently having the dump sampled as part of the closing of the facility.

The following observations were made during the site reconnaissance visit:

- o Both Kaiser and Kaiser Aluminum are fenced.
- o Waste oil and solvent tanks are above ground, secondarily contained, and appear to be in good condition.
- o The overburden area does not have a cover preventing material from migrating to air.
- o The Kaiser Aluminum dump does not have a cover or a liner.
- o Permanente Creek is approximately 500 feet from the overburden area. It is lined on Kaiser property.
- o There is a sediment pond located on Permanente Creek just before it flows off Kaiser property.

**APPENDIX B**  
**PHOTODOCUMENTATION**

FIELD PHOTOGRAPHY LOG SHEET

DATE: 8/27/90

TIME: 11:21 AM

DIRECTION:

North

WEATHER: Sunny

and warm

PHOTOGRAPHED BY:

Lester Aaron

DESCRIPTION:

Rock pile with cement kiln bricks.



DATE: 8/27/90

TIME: 11:52 AM

DIRECTION:

Northwest

WEATHER: Sunny

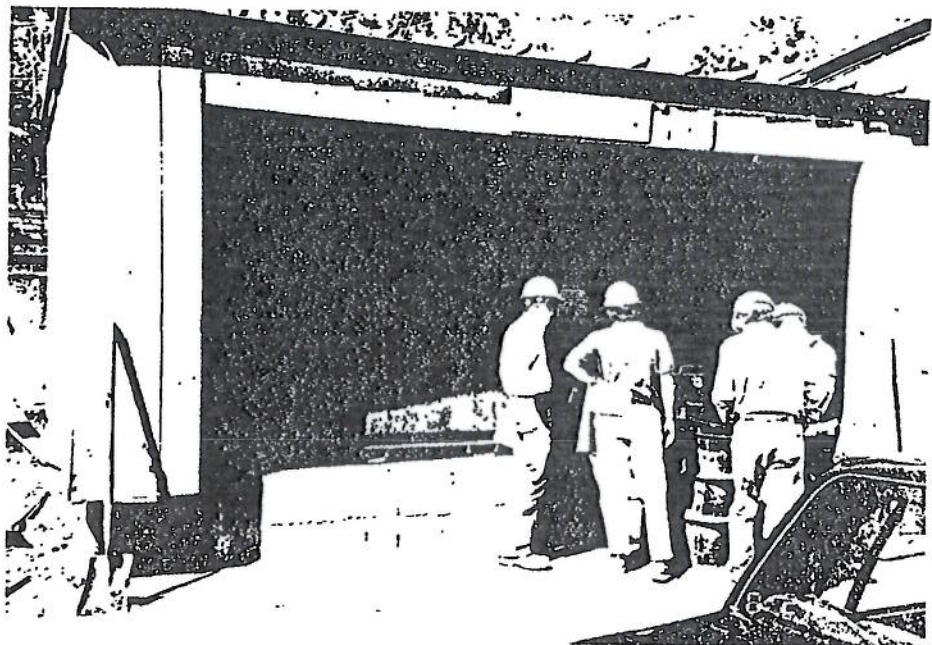
and warm

PHOTOGRAPHED BY:

Lester Aaron

DESCRIPTION:

Solvent storage area.



pt/kaiser/fpls



FIELD PHOTOGRAPHY LOG SHEET

DATE: 8/27/90

TIME: 12:03 PM

DIRECTION:

North

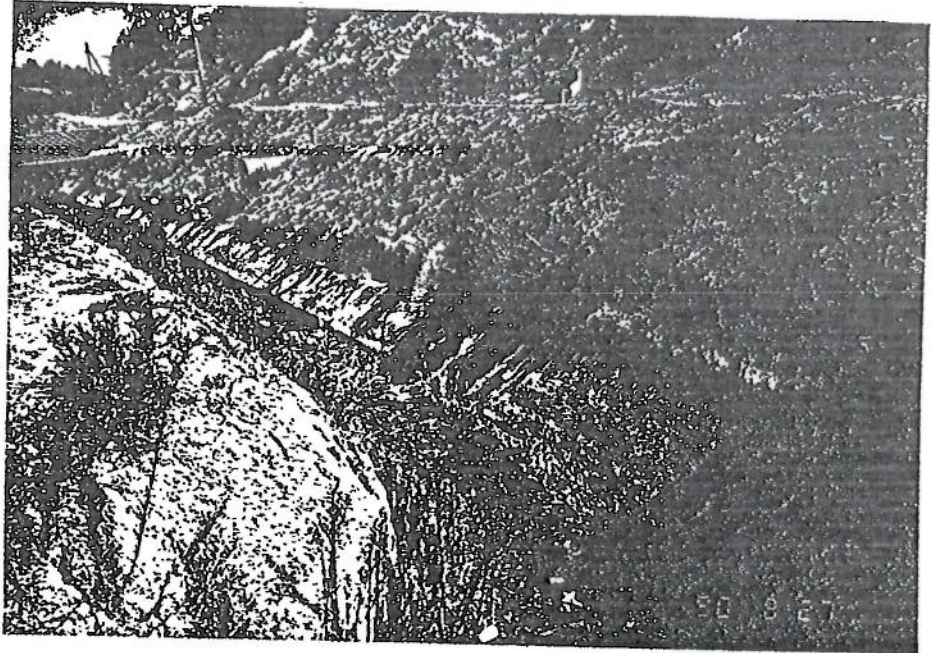
WEATHER: Sunny

and warm

PHOTOGRAPHED BY:

Lester Aaron

DESCRIPTION:



Permanente Creek on Kaiser property.

DATE: 8/27/90

TIME: 12:30 PM

DIRECTION:

Northwest

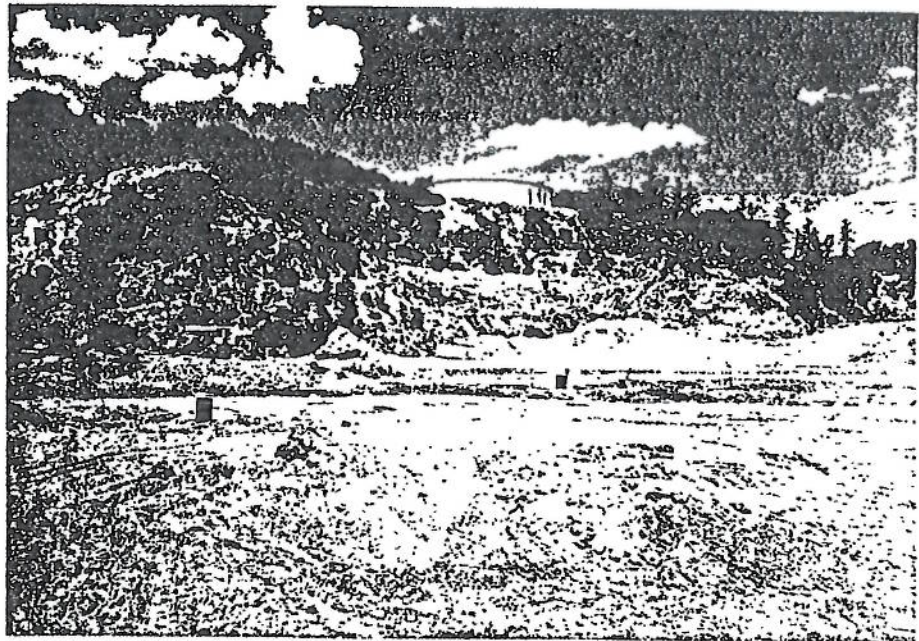
WEATHER: Sunny

and warm

PHOTOGRAPHED BY:

Lester Aaron

DESCRIPTION:



Kaiser Aluminum dump (Note: drums constitute sample boring locations).

pt/kaiser/fpls

# KAISER CEMENT CORPORATION

## INTER-OFFICE MEMORANDUM

TO R. M. Brier / R. Buccarelli

DATE March 5, 1991

COPIES TO J. Janneck  
T. O'Donnell  
F. A. Nelson  
J. H. Wimberly  
L. J. Liddiard

FROM M. J. Bishop



SUBJECT CERCLA SCREENING SITE INSPECTION  
(Comprehensive Environmental Response, Compensation and Liability  
Act of 1980)  
KAISER CEMENT - PERMANENTE

Some Good News.

The Kaiser Cement property at Permanente has been recommended by the E.P.A. for "No Further Remedial Action (N.F.A.) Planned Under CERCLA" (see attached report), following the CERCLA Screening Site Inspection.

Kaiser Aluminum has not yet had a Site Inspection (S.I.) but under the previous Preliminary Assessment was also N.F.A.'ed.

We will shortly have a report from Woodward Clyde which will provide further evidence that any groundwater contamination on the Kaiser site cannot flow into the groundwater basin of the Santa Clara Valley.

We should probably enter this report into the public record as it will re-enforce the E.P.A.'s conclusion resulting in the N.F.A. decision.

MJB/mkp

bcc: Jeff Weist  
Kim Kyle ✓



**KAISER CEMENT CORPORATION  
INTER - OFFICE MEMORANDUM**

**TO:** M.J. Bishop

**DATE:** April 5, 1991

**COPIES:** F.A. Nelson  
K.B. Kyle  
file

**FROM:** Jeff Wiest

*Jeff*

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**SUBJECT: Comments on Permanente Site Inspection Report**

As per your request, I was finally able to speak with Lisa Nelson of EPA Region 9 as of this date. During that conversation I indicated our appreciation for her response and cooperation in supplying us with a copy of Ecology and Environment's Site Investigation Report for Permanente. I then asked about the procedure we should follow in making any comments regarding the report in question.

Ms. Nelson indicated that there is no formal comment period "time limit" regarding this report, but said that if comments are to be made, they should be made as soon as possible. She went on to suggest that 60 days from the time the report was made available would certainly be acceptable (this would give us until about the end April to make comments). Further, any formal comments should be addressed to Ms. Nelson at EPA Region 9.

Ms. Nelson went on to say that all comments received regarding a site investigation are initially reviewed by the EPA. If the comments are found to be potentially significant in the opinion of the EPA, they are then forwarded to the contractor (Ecology and Environment in this case) for further review. Finally, if necessary, the contractor may either issue a revised SI Report, or may produce an addendum to the existing report which reflects the information presented in the comments. In all cases, any comments received are incorporated into the official file for the site in question, and would be considered in any future reviews of the site.

Finally, I stated that we intend to make two comments which tend to support E&E's recommendations. I then informed Ms. Nelson of the study which has been undertaken regarding the aquifer discontinuity at Permanente, and the study's results which tend to confirm the existence of that discontinuity. I also briefly explained the difference between the Permanente "kiln/mill bag-house dust" and typical cement kiln dust. Ms. Nelson indicated that both were "legitimate comments" and she urged us to formally make them in writing.